GEOLOGY OF THE BINGHAM CAMP

Report of Geological Survey Experts Is Completed.

SYNOPSIS OF ITS FEATURES

WORK IS ONE MINING MEN HAVE IMPATIENTLY AWAITED.

(Special to The Herald.) Washington, July 30 .- A work that is sure to be of practical as well as scientific interest is a professional paper entitled "Economic Geology of the Bingham Mining District, Utah," by

not have been available.

In his introductory chapter Mr. Emmons describes the general geological mons describes the general geological features of the Oquirrh range. The geography, topography, and areal geology of the Bingham district are described by Mr. Keith. In the economic portion of the report, which forms the main body of the paper. Mr. Boutwell gives a history of the Bingham mining district, discusses the character, occurrence, and genesis of its ores, and describes in detail the ore deposits in all the accessible workings of every-property in the district.

property in the district.

A chapter is devoted especially to the placer mines of the district. From all these detailed scientific and economic studies Mr. Boutwell deduces a valuable. able array of commercial applications, which will make interesting reading for the miner. The final chapter on recent developments brings the investiga-tion down to date. The volume is amply and appropriately flustrated with forty-nine photographic plates and ten miscellaneous maps, sketches,

Utah's Oldest Copper Plant.

Bingham is the oldest and largest copper producing camp in Utah. It is situated in the north central part of the state in the Oquirrh mountains, twenty miles southwest of Salt Lake City. The main slopes of the Oquirrhs, which rise steeply from elevations of about 5,000 feet on the surrounding deserts to elevations of 10,000 feet on the main divide, are deeply dissected by many narrow, steep, walled canyons.
Toward the northern end of the range is a prominent canyon which follows a crescentic course northeastward across its eastern slope and receives several tributary converges. several tributary canyons from the west. This is Bingham canyon, which has given its name to the mining dis-trict. Its drainage basin embraces the

principal mining localities which constitute the Bingham district, an oblong area of about twenty-four square miles. This region has been the center of a complex succession of geological activities which have resulted in the deposition of valuable ore bodies. The sedimentary country rock has suffered extensive intrusion, intense dissuring extensive intrusion, intense fissuring, and partial burial beneath a latite flow. The ore bodies are centered in the localities which have undergone the most intense intrusion and fissuring. Outside the limits of the comparatively small area that is characterized by the combined effects of these several activies ore deposits have not been found

The present output consists almost entirely of low-grade pyritous copper ore with comparatively small amounts of enriched high grade black copper sulphide ore and of rich argentiferous lead ore. The immense bodies of coplead ore. The immense bodies of the per ore occur as lenticular beds in metamorphosed limestone adjacent to intrusive and fissures. The rich arintrusive and fissures. The rich argentiferous lead ores occur in strong

The daily output of the camp is about 2,000 tons, which are produced almost entirely by five great consolidated properties located upon a belt of metamorphosed limestone. In 1900 the district produced only a little over 100,-000 tons of ore; in 1904 it is reported to have had an autput of nearly 1,000,000 tons of copper ore alone. Its total outout from 1874 to 1904 is valued at about

Genesis of Ore Deposits.

The two points in Mr. Boutwell's pathe geologist and the miner respective ly are his conclusions regarding the geneisi of the ore deposits and the

geneisi of the ore deposits and the probable future of the district.

Mr. Boutwell holds, briefly, that between carboniferous and late tertiary time, monzonitic intrusives invaded sediments in the Bingham area, metamorphised them, and introduced recommendated. norphosed them, and introduced me-tallic elements which heplaced marble-ized limestone with pyritous copper sulphide. Later, heated aqueous solu-tions introduced additional metallic elements, such as copper, gold, and sul-phur. Silver-lead ore was deposited in the northeast-southwest fissures, main-ly by filling, partly by replacement. Since this second period of mineraliza-tion these original ores have been altion these original ores have been artered in their upper portions by surface waters, to carbonates and dioxides, and relatively enriched in their underlying portions through replacement by black copper sulphide with additional gold and silver, probably as telluride.

portions through replacement by black copper sulphide with additional gold and silver, probably as telluride.

Mr. Boutwell believes that geological indications and recent developments are favorable to the future of the mining industry in this district. They show that it is reasonable to expect that new shoots of valuable coppersulphate ore will be found in the great limestones in central localities, and that new lodes of rich argentiferous lead ore will be discovered in the composite country rock about the head of Bingham canyon, and in or adjacent to the calcareous-carbonaceous shale northwest of Bingham canyon and farr Fork. Furthermore, recent mine. posite country rock about the head of Bingham canyon, and in or adjacent to the calcareous-carbonaceous shale northwest of Bingham canyon and

northwest of Bingham canyon and Carr Fork. Furthermore, recent mining developments have increased the known resources of two types of copper deposits, first by indicating that the values in the great copper shoots descend in depth, second by proving that the disseminated low-grade auriferous copper ores in monzonite can be milled at a profit. These facts indicate a probable regular increase in the output in the immediate future and imply the continued prosperity of the mining industry of Bingham.

This valuable work will soon be ready for general distribution. It is

ready for general distribution. It is listed as Professional Paper No. 38, and may be obtained, free of charge, on application to the director of the geological survey, Washington, D. C.

City last week, he announced that the new smelter to be erected in the valley there by the company will be completed and in operation by next spring, says the Chicago Mining World.

The new smelter will be equipped with all the latest improvements and will be as modern and complete as it is possible to build a smelter. It will be erected for the treatment of copper ores and will be designed to treat profitably low-grade ore, and this alone will lead to the development of many bodies of low-grade ore that are now bodies of low-grade ore that are nov not touched.

The fact that this strong smelting

corporation has decided upon building this smelter speaks volumes for the value and life of the mines within the state of Utah and the territory con-

LIKES IRISH MOUNTAIN.

Denver Expert Says Camp Is Coming to the Front Without Doubt.

M. T. Ellis, representing a Denver mining syndicate, the Hewlett Mining company, passed through DeLamar last Saturday, en route to Denver, Bingham Mining District, Utah," by John M. Boutwell of the United States geological survey. An introductory chapter on the general geology of the region about the Oquirrh range by S. F. Emmons adds much to the value of the paper, and a section on the areal geology of the Bingham district by Arthur Keith contributes greatly to its interest.

The field work of which this report represents the final results was first undertaken in the summer of 1900. Owing to the fact that the geological structure of this district proved to be unexpectedly intricate; the work of investigation has been more prolonged than was at first expected. While the delay is cause for regret, this regret is much tempered by the consideration that had the report been published earlier many important facts brought to light during the vigorous development of the region in late years would not have been available.

In his introductory chapter Mr. Emwhere he is going to report to his company upon mines the syndicate has asquired in the Irish mountain dis-trice. A Lodge representative inter-

but why don't you people sink deep? Depth will develop great mines for

Mr. Ellis was accompanied by M. H. Ropkey, correspondent of the Denver Mining Record, the most prominent mining paper in the west. Mr. Ropkey is very sanguine of the future of southern Nevada, and says that Denver controllers are ver capitalists are continually making inquiries at his office for information regarding this country.

Let us not be too modest in putting

forward the natural resources

INDEPENDENCE HAS STRIKE.

Three Feet of Rich Ore in Large Body of Milling Rock. J. B. Eldredge has brought in about

twenty-five pounds of ore from the Independence mine at Big Creek that is remarkably fine. It is heavily stained with flourine and carries high values in gold these appearing as a telluride these appearing as a telluride.

This ore comes from a shoot opened up this season. A new tunnel was started last winter to crosscut the vein. came upon this ore at the foot wall. The contractors stopped the crosscut-ting at that point and began drifting, south, following in the porphyry foot wall. This drift has been driven sev-

south, following in the porphyry foot wall. This drift has been driven seventy-five feet, and crosscuts show the high-grade ore body extend* all the way. It is about three feet thick.

Mr. Eldredge made an assay on a piece of the ore yesterday and secured a return of \$1,300 a ton. Other pieces in the lot are estimated to run all the way from \$100 up to the figure returned by the piece assayed. This ore shoot crops on the surface and it was expected the tunnel would cut it, but there had been nothing before from which to judge its size.

The great mass of the ore of the Independence is low-grade, from \$6 to \$7 a ton, but telluride is met with at points in all the tunnels. Two tunnels have been driven across the ore body, this proving to be 235 feet wide in one and about the same width in the other. Persistent mineralization characterizes the ledge, there being no barren rock found in any of the workings.

While that mass of low-grade ore constitutes the great asset of the property, this high-grade streak gives the mine a measure of added value.

DREDGES FOR SNAKE RIVER.

Idaho Promoter, After Two Years' Work, Is Ready to Operate.

J. L. Weaver has returned to Boise after an absence in Philadelphia and other eastern cities of nearly two years. He has been promoting dredge propositions on the Snake river. He has enlisted large capital in his projects, which he is confident will prove abundantly successful.

The principal feature of Mr. Weav-The principal feature of Mr. Weaver's plans is the erection of a mammoth dredge that will save all the black sand and will also save the fine gold, together with platinum and several other rare metals. The dredge operated for a time proved successful in a way, but was so deficient in some respects as to make the building of new machinery almost a necessity.

Challis, Idaho, July 26.—The sensational gold discoveries made recently on Parker mountain, some twenty miles west of Challis, the county seat of the challing th

Challis is the departing point and several mining men representing some very strong syndicates, are here mak-ing preparations to depart for the new

The owner of the Ed. Williams claim refused \$30,000 for it a few days ago, and parties going in tomorrow say they are prepared to pay \$50,000 for the ground.

Saddle and pack horses are at a and pack horses are at

premium and must be engaged ahead.

Mining Notes.

Preparations are making to resume operations at the Congor property in Bingham. G. G. Hall is to manage the proposition, which is largely controlled by Glen R. Bothwell and R. E. McConahay. New boilers and new hoisting machinery are being provided.

Manager W. J. Craig of the Kennebec will leave for that Alta proposition again today. Nothing is being said concerning the results of development work, but there is a suspicion that more is happening than the management is willing to admit at his time.

The Austin Powled.

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During the visit of Mr. Daniel Guggenheim, chairman of the executive committee of the American Smelting & Refining company, to Salt Lake

SECRET SOCIETIES.

Women of Woodcraft.

Women of Woodcraft.

There was no meeting of Silver Maple circle, 108, on Friday evening, July 21, the occasion being the annual outing to Lagoon. The afternoon was spent in carrying out a programme of field and miscellaneous sports. The following is a list of names of lucky ones who carried off prizes; E. C. Evans and Miss Ethel Watson, waltzing prizes; William Timmons and Miss May Adams, two-step prizes. The races were won by Lillia Habish, Walter Heath, May Hansen, Margaret Neuman, Archie Winsness, Lillie and Ellia Farrar, Minnle Davis, Sylvia Sebastian, Helen Critzer, Prank Baer, Howard Hansen, George Graham, Wilford Johnson and Leonard Cheshire?

Robert Graham ate a bun in the quickest time and got fifty pounds of flour to make more with. The widow with the largest family was Jemima C. Hansen, Other prize winners: Oldest woman in W. of W. Mrs. Elizabeth Moore, 55 years of Crescent circle, 101, of Murray, a rocker; fattest baby, George Van Steeter; prettiest baby, Bernice Taylor. Mrs. M. E. Johnson drove five nails in fifteen seconds and won half a ton of coal. The most popular woman was Miss Margaret Free, musician of 108, W. of W. The bowling contest was won by Mrs. J. J. Hunt. The guards of 108 gave a fancy drill and the rest of the evening was spent in dancing. Silver Maple circle, 108, will go to Saltair on Aug. 28 for a day's outing.

Maccabe's:

Maccabess Maccabe National Maccabe Macca

Knights of Pythias.

Rocky Mountain lodge No. 3 is still adding to its membership. Several applications were received last Thursday evening and the class of fifteen will probably be ready to take the first rank on the evening of Aug. 7. On account of other business before the lodge, there was no rank work last Thursday evening, but the rank of Knight will be conferred on four candidates Thursday evening, Aug. 3. The committee in charge of the excursion to Lagoon. Aug. 29, has decided to put up a silver cup as a trophy to be held by the lodge winning the game of baseball. The cup or trophy will be played for each year.

Fraternal Union of America.

Evergreen lodge, No. 151, will hold a regular meeting tonight. Tonight's meeting will be one of interest to all fraters, as the report of the stewards for the past six months will be made, showing the financial as well as the social condition of our lodge. The new officers will be duly installed in office tonight. Fraternal Master Mayo will receive the honors of Past Fraternal Master. The secretary will be at his desk at 7:15 p. m.

George R. Maxwell, W. R. C., will hold its regular meeting Wednesday afternoon.

DENVER AND RETURN \$18.00

On Aug. 12 and 13, round trip tickets to Denver will be sold via the Colorado Midland for \$18.00.

The Midland route is the right way through the mountains for the best scenery, service and equipment. Through the Rockies in our Pullman Observation ceach by daylight. Ask at Observation coach by daylight. Ask at the Midland ticket office, 77 West Sec-ond South, Salt Lake, for further par-ticulars and descriptive literature.

TO CREOSOTE FENCE POSTS.

Forestry Official Tells of Boon in Safety Deposit Boxes for Rent Plan For Farmers of Southern California.

geles, leaving for the latter city last

At the Wilson hotel yesterday Mr Ayres said that his purpose in going to southern California was to conduct government experiments with the use of creosote in prolonging the life of fence posts. The department of agriculture aims to show that eucalyptus wood, in which California abounds, can be utilized as fence posts and made as serviceable as much more expensive timber. The eucalyptus posts will be soaked in a creosote solution, and after this preparation will, it is believed, outlast other woods which are less com-

iceable, it will mean the saving of thousands of dollars to the farmers of California," said Mr. Ayres. "The state abounds in eucalyptus, and our experiments will have for their aim the utilization of this wood as fence posts."

respects as to make the building of new machinery almost a necessity. Owing to defective parts, only a small amount of gravel could be handled in a day. New dredges, greatly improved, are now being put up near Mountainhorpe that will handle a vast tonnage, and promise to make as good a saving as was secured on the old dredge.

Mr. Weaver, having made the desired financial arrangements, has returned to superintend the construction of the new dredges.

Experiments will have for their aim the utilization of this wood as fence posts."

Lander county, and will connect it with the Clark route, taking in Goldfield, Builfrog and Tonoppah.

Oscar Wilkins of Vernal says that placer mining near Jensen's, on Green river, is being steadily prosecuted, although the high water of spring and early summer has somewhat interfered with work. Men using 'Tockers' are taking of the new dredges.

PARKER MOUNTAIN DISCOVERIES

When the Still on and Reports Indicate
Big Values in Ore.

(Special Correspondence)
Challis, Idaho, July 26.—The sensational gold discoveries made recently on Parker mountain, some twenty miles west of Challis, the county seat of Custer county are increasing.

to the Gold Dust soon, and bring his family.

The fact cannot be denied that Preston is beginning to grow with a rapidity that we may call a boom, says the Cache Valley News. There are several things of late that cause our good people here to think that its growth in the future will outstrip its marvelous growth of the past. In this connection the new mining claims of Messrs. Jolley, Spongberg and Inglet will probably play an important part. Numerous assays have been made and as far as surface indications are concerned we may have gold fields that will rival the gold fields of Nevada.

Hardie's Uintah Reservation Town-ship map and guide, 15 cents coin at book stores or 314 So. 2d West St. J. OBERNDORFER,

Stock Broker, Tel. Bell 792. 161 S. Main St:

PORTLAND EXCURSIONS Via Oregon Short Line. Salt Lake to Portland and return (direct)......\$31.50 salt Lake to Portland and return

(one way via Los Angeles)..... 50.50

Five diving horses at Saltair. Free.

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Now have our own membership on Chicago Board of Trade. 6 West Second South St. Salt Lake City.

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The new Bartlett Simplex Concentrating Table

Has capacity, does clean work, weighs 900 pounds. Price, only \$300.00. See it work at EXHIBITION ROOM, 151 WEST SECOND SOUTH ST., CITY. Colorado Iron Works Company of Denver.

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GEORGE RUST, General Manager Utah, Idaho, Wyoming and Nevada, Offices in Progress Building, Salt

FINANCIAL.



P. W. Ayres, agricultural department, Washington, D. C., arrived in Salt MCCORNICK & CO.

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Lead and Copper Ores

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Is now in the market for all kinds of lead and copper ores at PRICES FAVORABLE TO SHIPPERS.

To Salt Lake City, Utah.

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When shipment is saide please NOTIFY US PROMPTLY and if PUBLIC SAMPLER is preferred, DESIGNATE WHICH ONE; also designate ONE ASSAYER.

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FIRE PUBLIC

SOUTH COLLEGE AND ADDRESS AND

PROBATE AND GUARDIANSHIP NOTICES.

ult county clerk or the respective for further information. IN THE DISTRICT COURT, PROBATE division, in and for Salt Lake county, State of Utah. In the matter of the estate of Utah in the matter of the estate of Charles, Auer deceased.—Notice. The petition of H. P. Lytle, administrator with will amnexed of the estate of Charles Auer, deceased for confirmation of the sale of the following described real estate of said decedent, to-wit. All of, lot 5, block 12, plat J. Salt Lake City survey, situate in the city and county of Salt Lake, State of Utah, for the sum of \$350.00. And upon the following terms, to-wit: Cash upon confirmation; as appears from the return of sale, filed in this court, has been set for hearing on Saturday the 5th day of August, A. D. 1905, at 16 o'clock a. m., at the county court house, in the court room of said court, in Salt Lake City, Sait Lake county, Utah.

Witness the clerk of said court. (Seal) with the seal thereof affixed this

ty, Utah.

Witness the clerk of said court,
(Seal.) with the seal thereof affixed this
25th day of July. A. D. 1996.

J. U. ELDREDGE, Jr., Clerk.
By W. H. Farnsworth, Deputy Clerk.
D. B. Hempstead, Attorney for Peittioner

Notice of Sale.

IN THE MATTER OF THE GUARdianship of Rosa P. Roylance, an incompetent.—Notice is hereby given that
the undersigned will sell at private sale,
on or after Aug. 7, 1905, at 12 o'cleck
noon, the following described real propcrty situated in Sait Lake county, Utah:
Beginning at a point 14½ rods south of
the northeast corner of lot 19, block 2,
5-acre plat "A." Big Field survey, running thence west 10 rods, thence south
9 rods, more or less, to the center of
Canyon creek, thence northeasterly up
the center of Canyon creek to the intersection of said creek with the cast
line of said block 2, thence north 74 rods,
more or less, to the place of beginning.
Written bids will be received at 1577 South
Stage street, Sail Lake City, Utah. Terms
of sale.

WILLIAM G. ROYLANCE.

tion of sale.
Guardian of Rosa P. Roylance, an Incompetent.
Dated July 27, 1905.

Dated July 27, 1995.

IN THE DISTRICT COURT, PROBATE division, in and for Salt Lake county. State of Utah. In the matter of the estate and guardianship of Alexander Shields and Leland L. Shields, minors.—Notice. The petition of Joseph J. Shields, the guardian of the persons and the estates of Alexander and Leland L. Shields, minors, praying for an order of sale of real and personal property of said minors, and that all persons interested appear before the said court to show cause why an order should not be granted to sell so much as shall be necessary of the following described real and personal estate of said minors, to-wit: 2-21st interest in and to the following real estate, to-wit:

terest in and to the following real estate, to-wit:

1st. 125.86 acres of land situated in section 19, township 1 south of range 2 west of the Salf Lake meridian, described as commencing at the southwest corner of the northeast quarter of section 19 aforesaid, and running thence north 160 rods; thence east 80 rods; thence south 40 rods; thence east 80 rods; thence south 40 rods; thence east 80 rods; thence south 53 rods; thence west 15 rods and 16 feet; thence south 67 rods; and thence west to the place of beginning, the value of the interest of said two minors therein being. 36.89 2nd. Also 72:36 acres of ground in section 29, township and range aforesaid, described as commencing 101 rods from the southeast corner of the northwest quarter of said section 22, running thence north 160 rods; thence west 72 rods and 9½ feet; thence south 160 rods; and thence east 72 rods and 2½ feet; thence south 160 rods; and thence east 72 rods and 2½ feet; thence so of said two minors therein being.

2rd. Also certain contracts of purchase of state lands from the state of Utah, the same being still subsisting and valid contracts, covering the following described property: The northwest quarter of the northeast quarter, and the southwest quarter of the northwest quarter, and the southwest quarter of the northwest quarter. In section 10, township 2 south of range 3 west of the Sait Lake meridian, containing 160 acres, the value of the interest of said two minors therein being.

4th. Also the southeast quarter of section 21, township 1 south, range 125.86 acres of land situated in